

It is claimed:

- 5 1. A printable plastic film, comprising:
- i) a plastic substrate layer;
 - ii) a printable coating composition layer which comprises:
 - a) an anionic acrylic polymer; and
 - b) epoxy acrylate in an amount sufficient to improve ink adhesion in said coating composition.
- 10 2. The plastic film of claim 1 wherein said anionic acrylic polymer is cross-linked to an extent sufficient to improve the resistance of said coating to isopropyl alcohol and/or hot water, using a cross-linking agent.
3. The plastic film of claim 2 wherein said anionic acrylic polymer is an iminated polymer.
- 15 4. The plastic film of claim 2 wherein said cross-linking agent is selected from the group consisting of polyfunctional aziridine, epoxy silane, polyfunctional epoxy, polyvalent cation selected from the group of metal ions consisting of Zr, Zn, Ca, and Ti, acetoacetate, carbodiimide, urea formaldehyde melamine formaldehyde and polyfunctional isocyanate.
5. The plastic film of claim 2 wherein said cross-linking agent is a polyfunctional aziridine.
- 20 6. The plastic film of claim 2 wherein said cross-linking agent is selected from the group consisting of epoxy silane, polyfunctional epoxy, urea formaldehyde, melamine formaldehyde.
7. The plastic film of claim 6 wherein said cross-linking agent is added with a cross-linking catalyzing amount of a catalyst.
- 25 8. The plastic film of claim 7 wherein said catalyst is selected from the group consisting of imidazole, tertiary amine and p-toluene sulfonic acid.

9. The plastic film of claim 2 wherein said coating has dispersed therein a particulate or combination of different particulates.

10. The plastic film of claim 2, which further comprises a primer layer between said substrate layer and said coating composition layer.

5 11. The plastic film of claim 2 which has a dry coating weight of at least 0.1 grams/1000 in²; and an ink print image on the side of said coating opposite from said plastic substrate layer.

12. The plastic film of claim 2 wherein said epoxy acrylate is the reaction product of an ether containing a three member oxirane ring of a member selected
10 from the group consisting of phenols, bisphenols, ring substituted bisphenols, resorcinol, hydroquinone, adipic acid, phthalic acid, hexahydrophthalic acid, 2-hydroxy-3-chloropropyl acrylate, allyl alcohol, phenol, 1,6-hexanediol, glycerol, phenol formaldehyde novolac resins, polyethylene glycol, polypropylene glycol, ethylene glycol, propylene glycol, 1-4 butanediol, 1-6 hexanediol glycerol, glycol,
15 lower alkyl substituted hydantoin and mixtures thereof; and an unsaturated acid selected from the group consisting of acrylic acid and methacrylic acid, diacrylic acid, dimethylacrylic acid, triacrylic acid and trimethylacrylic acid.

13. The plastic film of claim 2 wherein said epoxy acrylate is the reaction
20 product of a glycidyl ether of a member selected from the group consisting of polyethylene glycol and polypropylene glycol; and an unsaturated acid selected from the group consisting of acrylic acid and methacrylic acid.

14. The plastic film of claim 2 wherein said epoxy acrylate is stabilized by the
25 incorporation of a stabilizer selected from the group consisting of methyl ether of hydroquinone, and hydroquinone.

15. A printable coating composition for plastic film which comprises:
a) an anionic acrylic polymer; and

b) epoxy acrylate in an amount sufficient to improve ink adhesion in said coating composition.

16. The coating composition of claim 15 wherein said anionic acrylic polymer is cross-linked to an extent sufficient to improve the resistance of said coating to isopropyl alcohol and/or hot water using a cross-linking agent.

17. The coating composition of claim 16 wherein said anionic acrylic polymer is an iminated polymer.

18. The coating composition of claim 16 wherein said cross-linking agent is selected from the group consisting of polyfunctional aziridine, epoxy silane, polyfunctional epoxy, polyvalent cation selected from the group of metal ions consisting of Zr, Zn, Ca, and Ti, acetoacetate, carbodiimide, urea formaldehyde, melamine formaldehyde and polyfunctional isocyanate.

19. The coating composition of claim 16 wherein said epoxy acrylate is the reaction product of:

- 1) a glycidyl ether of a member selected from the group consisting of phenols, bisphenols, ring substituted bisphenols, resorcinol, hydroquinone, phenol formaldehyde novolac resins, propylene glycol, polypropylene glycol, ethylene glycol, polyethylene glycol, 1-4 butanediol, 1-6 hexanediol glycerol, glycol, lower alkyl substituted hydantoin and mixtures thereof; and
- 2) an unsaturated acid selected from the group consisting of acrylic acid and methacrylic acid, diacrylic acid, dimethylacrylic acid, triacrylic acid and trimethylacrylic acid.

20. A label comprising a printable plastic film containing:

- i) a plastic substrate layer having two sides;
- ii) a printable coating composition layer on one side of said plastic substrate layer, whose outer surface is printed, which coating composition comprises:

a) an anionic acrylic polymer;

b) epoxy acrylate in an amount sufficient to improve ink adhesion in said coating composition;

c) an optional cross-linking agent for said anionic acrylic polymer;
and

5 iii) an optional adhesive layer on the other side of said plastic substrate layer.

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